

Appl. No. 09.884,403
Response Dated November 3, 2005
Reply to Office Action of August 3, 2005

Remarks

This Response is responsive to the Office Action of August 3, 2005.
Reexamination and reconsideration of claims 1-21 is respectfully requested.

Summary of The Office Action

The title of the invention was objected to as not being descriptive.

Claim 10 was objected to because of the following informalities: In claim 10, line 2, "the probability data" has antecedent issues.

Claims 1-9, 11-13, 15, 16, and 20 were rejected under 35 U.S.C. 102(b) as being anticipated by Pon et al. (US 6,047,251).

Claims 10, 14 and 17-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pon in view of Elworthy (US 6,125,362).

The Present Amendment

Claim 1 has been amended with language that is supported by, for example, paragraphs [0011] and [0025-0028] of the present application, and dependent claims 2 and 3, which are now canceled. Thus, no new matter has been added. Claim 7 has also been amended and the amendments are also supported by paragraphs [0011] and [0025-0028] of the present application, for example. Thus, no new matter has been added

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Non-Art Rejections

The Title was objected to as being not descriptive. The title has now been amended and is believed to be descriptive.

Claim 10 was objected to because in claim 10, line 2, "the probability data" purportedly has antecedent issues. Prior to this phrase, claim 10 recites "pregenerating probability data" which provides antecedent basis for "the probability data". Applicant respectfully submits that claim 10 includes all appropriate antecedents.

The Present Claims Patentably Distinguish Over the References of Record

Pon fails to teach or suggest the present claims. For example, Pon fails to teach or suggest a database that contains probability data as recited in claim 1 since Pon uses a word dictionary to determine whether a selected word is contained in the word dictionary for a language (column 7, lines 1-3, and lines 25-27).

Because a word is either in the dictionary or is not, the confidence statistic taught by Pon is basically a "yes" or "no" value, and thus is not a probability value of being in a language. In particular, Pon states,

"the statistic can simply be a one or a zero, in dependence upon whether the word is found in the dictionary for the language." (column 7, lines 1-3).

Then, the confidence statistic for a language is found by "counting the number of words in the zone that are found in each of the respective dictionaries." (column 5, lines 63-65). Therefore, Pon fails to teach or suggest the recited elements of claim 1.

Furthermore, Pon fails to teach or suggest an extractor for extracting a character string having a length equal to the predetermined length of the plurality of text strings

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contained in the database as recited in claim 1. Pon extracts words, and words have variable lengths. Therefore, the claimed extractor is not taught or suggested.

Pon also fails to teach or suggest an associated probability value indicating a probability that the text string occurs within a language based on occurrences of the text string in all of the candidate languages as recited in claim 1. Pon uses language dictionaries for word matches. Dictionaries do not have probability values and certainly do not have probability values based on text string occurrences between multiple dictionaries. Elworthy also fails to cure this shortcoming since Elworthy uses independent probabilities: "the probabilistic model for one language is independent of the others." (column 8, lines 5-7).

Since claim 1 recites features not taught or suggested by the Pon, claim 1 patentably distinguishes over the reference. Accordingly, dependent claims 4-6 also patentably distinguish over the reference and are in condition for allowance.

Independent Claim 7

Applicant respectfully submits that Pon teaches a system that determines whether a zone in a document is in a language by proving that selected words are found in a dictionary of that language (see column 5, lines 63-65). Thus, Pon positively proves that a zone is in a language by an affirmative score of matching dictionary words. Pon does not determine a contrary probability for each candidate language and disprove a null hypothesis for a language using the contrary probability to determine the language of a document as recited in claim 7.

The Office Action cites column 7, lines 40-45 of Pon to teach disproving. However, this section says nothing about disproving. Applicant respectfully submits that disproving cannot be implied from Pon based on setting an initial confidence statistic to zero. Pon proves a positive and does not disprove a null hypothesis as claimed.

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Additionally, as previously explained, Pon matches words in a dictionary to get a statistic of a "1" or a "0". Pon does not use probability values as claimed and fails to teach or suggest retrieving probabilities from a database of probability values as claimed.

Since claim 7 recites features not taught or suggested by the Pon, claim 7 patentably distinguishes over the reference. Accordingly, dependent claims 8-14 also patentably distinguish over the reference and are in condition for allowance.

Independent Claim 15

Applicant respectfully submits that Pon teaches a system that determines whether a zone in a document is in a language by proving that selected words are found in a dictionary of that language (see column 5, lines 63-65). Thus, Pon positively proves that a zone is in a language by an affirmative score of matching dictionary words. Pon does not teach or suggest disproving a probability assumption based on a contrary probability that the character string does not belong to the selected language such that if the contrary probability fails to support the probability assumption, then the document is determined as being in the selected language as recited in claim 15.

Setting a confidence statistic to zero cannot be interpreted to teach the claimed disproving as recited in claim 15. Pon accumulates positive word matches for a language, thus determines a language as the one with the most word matches. As previously described, Pon does not use probabilities for its confidence statistic but rather a simple yes or no score (1 or 0) for whether a word is in a dictionary. Thus, Pon fails to teach or suggest anything about a contrary probability as recited in claim 15.

Therefore, claim 15 recites features not taught or suggested by the Pon, and claim 15 patentably distinguishes over the reference. Accordingly, dependent claims 16-20 also patentably distinguish over the reference and are in condition for allowance.

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103 Rejections

Claims 10, 14 and 17-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pon in view of Elworthy (US 6,125,362). Applicant respectfully submits that Elworthy fails to teach or suggest the claimed features. In particular, Elworthy teaches independent probabilities: "the probabilistic model for one language is independent of the others." (column 8, lines 5-7). Thus, Elworthy fails to teach or suggest the feature relating to normalization as recited in claims 10 and 14, or dependencies of occurrences of strings similar to claims 17-19, and fails to cure the shortcomings of Pon.

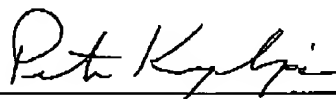
For these additional reasons, claims 10, 14 and 17-19 patentably distinguish over the references of record.

Conclusion

For the reasons set forth above, claims 1 and 4-21 patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

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